

ABSTRACT OF THE DISCLOSURE

5 A device (100, 140, 150) for differentially absorbing light, depending on the state
of linear polarization of the light, is disclosed. This polarizing effect is induced and
controllable by the level of ambient light impinging on the device. The device (100, 140)
may be used as an anti-glare vision protection device which selectively absorbs specularly
reflected sunlight in brightly lit environments while permitting all light to pass in dimly lit
environments. The device (100) includes a carrying medium which may be a film (142) or
10 opposed substrates (112) that are sealed. A film or the opposed substrates carry a mixture
(120) of fluid material (124) and photochromic dyestuffs (122), wherein the photochromic
material is activated upon the detection of ultraviolet light so as to absorb some of the light
and wherein the energization of the photochromic material effects the material so as to
simultaneously selectively absorb the specularly reflected sunlight. The material (124) may
15 be any fluid that dissolves the photochromic dyestuff material (122). The fluid is preferably
a liquid crystal material such as nematic or chiral nematic. Alternatively, the material (124)
may be a polymer liquid crystal. The device (150) may allow for electrical control of the
absorptive properties.